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ABSTRACT

Participant materials are provided from a workshop to acquaint women with nontraditional careers in the skilled trades and to help them become more knowledgeable about their options in making informed career decisions. The agendas for five day-long sessions outline the scope of the workshop that emphasizes basic math skills, hands-on experiences in nontraditional occupational areas, specific requirements needed for nontraditional careers, work-related tests, and familiarity with terminology and hand tool usage. Representative materials in this package include a self-analysis shield, self awareness/knowledge instruments, information on assertiveness, role playing situations, information on communications, a quiz on women in the work force, a vocational interest checklist, information on types of training for nontraditional careers, information on potential problems in nontraditional fields, a life change questionnaire, suggestions for coping with stress, instructions for meditative relaxation, requirements and problems in apprenticeships, information on job interviews and applications, sources of information about employment, 25 pages of math problems, and six pages of exercises for physical fitness. (YLB)

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# PRE-INDUSTRIAL TRAINING WORKSHOP

Presented by the
Amarillo College
Office of Women's Programs
and
Texas Education Agency
Research and Innovative Programming Unit

The Amarillo College Office of Women's Programs welcomes you to a Pre-Industrial Training Workshop. This is one in a series of four workshops that will be held during the year beginning August 1981, and ending June, 1982.

The purpose of the program is to acquaint women with nontraditional careers, helping them become more knowledgeable about their options so as to make informed career decisions.

The scope of the workshop includes sessions emphasizing basic math skills, hands-on experiences in nontraditional occupational areas, specific physical requirements needed for nontraditional careers, work-related tests, and familiarization with terminology and hand tool usage. Discussing job information with a panel of industry personnel and making inquiries about unions to local union personnel will highlight the week.

Workshop participants will also have an opportunity to explore their own interests, attitudes, and goals as well as practice effective communication skills and assertiveness.

We anticipate an exciting and productive week and look forward to working with you.

CE036922

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Session I

8:30 a.m. ---------- Introduction and Welcome to the Workshop

8:45 a.m. ---------- Getting to Know You

9:30 a.m. ---------- Jim Oldham, Electronics Technician, Federal Aviation Administration

10:30 a.m. ---------- Break

10:45 a.m. ---------- Self Awareness

11:30 a.m. ---------- Significant Others

12:00 p.m. ---------- Lunch

12:30 p.m. ---------- Self-Acceptance and Acceptance of Others

1:00 p.m. ---------- Wide Range Achievement Test

1:30 p.m. ---------- Auto Mechanics Laboratory, Randall Carr, Amarillo College Instructor

3:00 p.m. ---------- Physical Fitness, Sheila Donaghe, Amarillo College Physical Education Instructor

## Session II

8:30 a.m.---------- Basic Shop Math, Jim Oldham of FAA

10:00 a.m.---------- Break

10:15 a.m.---------- Communication Skills

11:15 a.m.---------- Assertiveness

12:00 p.m.---------- Lunch

12:30 p.m.---------- Hand Tool Usage, Jim Fenwick, Apprenticeship Coordinator of the Iron Workers Local 408

1:00 p.m.---------- Commercial Electronics Laboratoty, Robert vanBlommestein, Amarillo College Instructor

2:30 p.m.---------- Physical Fitness, Sheila Donaghe of Amarillo College

Session III

8:30 a.m.---------- Basic Shop Math, Jim Oldham, FAA

10:00 a.m.---------- Women & Work: The Facts

10:45 a.m.---------- Break

11:00 a.m.---------- Nontraditional Options: Are You Ready?

11:30 a.m.---------- Problems in Nontraditional Careers

12:00 p.m.---------- Lunch

12:30 p.m.---------- Stress Management

1:00 p.m.---------- Air Conditioning/Refrigeration Laboratory, Joe Ammons, Amarillo College Instructor

2:30 p.m.---------- Basic Hand Tool Usage

Session IV

8:30 a.m.---------- Basic Shop Math, Jim Oldham, FAA

10:00 a.m.---------- Apprenticeships

10:45 a.m.---------- Break

11:00 a.m.---------- Panel (Labor Unions)

12:00 p.m.---------- Lunch

12:30 p.m.---------- SRA Mechanical Aptitude Testing

1:30 p.m.---------- Welding Laboratory, Jimmy Bradshaw, Amarillo College Welding Instructor

3:00 p.m.---------- Physical Fitness, Sheila Donaghe of Amarillo College

## Session V

8:30 a.m.---------- Basic Shop Math, Jim Oldham, FAA

9:30 a.m.---------- Job Skills: Applications, Interviews

10:15 a.m.---------- Break

10:30 a.m.---------- Interviewing Role Play

11:00 a.m.---------- Industry Personnel Panel

12:00 p.m.---------- Lunch

12:30 p.m.---------- Basic Hand Tool Usage, Jim Fenwick, Iron Workers 408

1:30 p.m.---------- Break

1:45 p.m.---------- Wrap Up and Workshop Evaluations

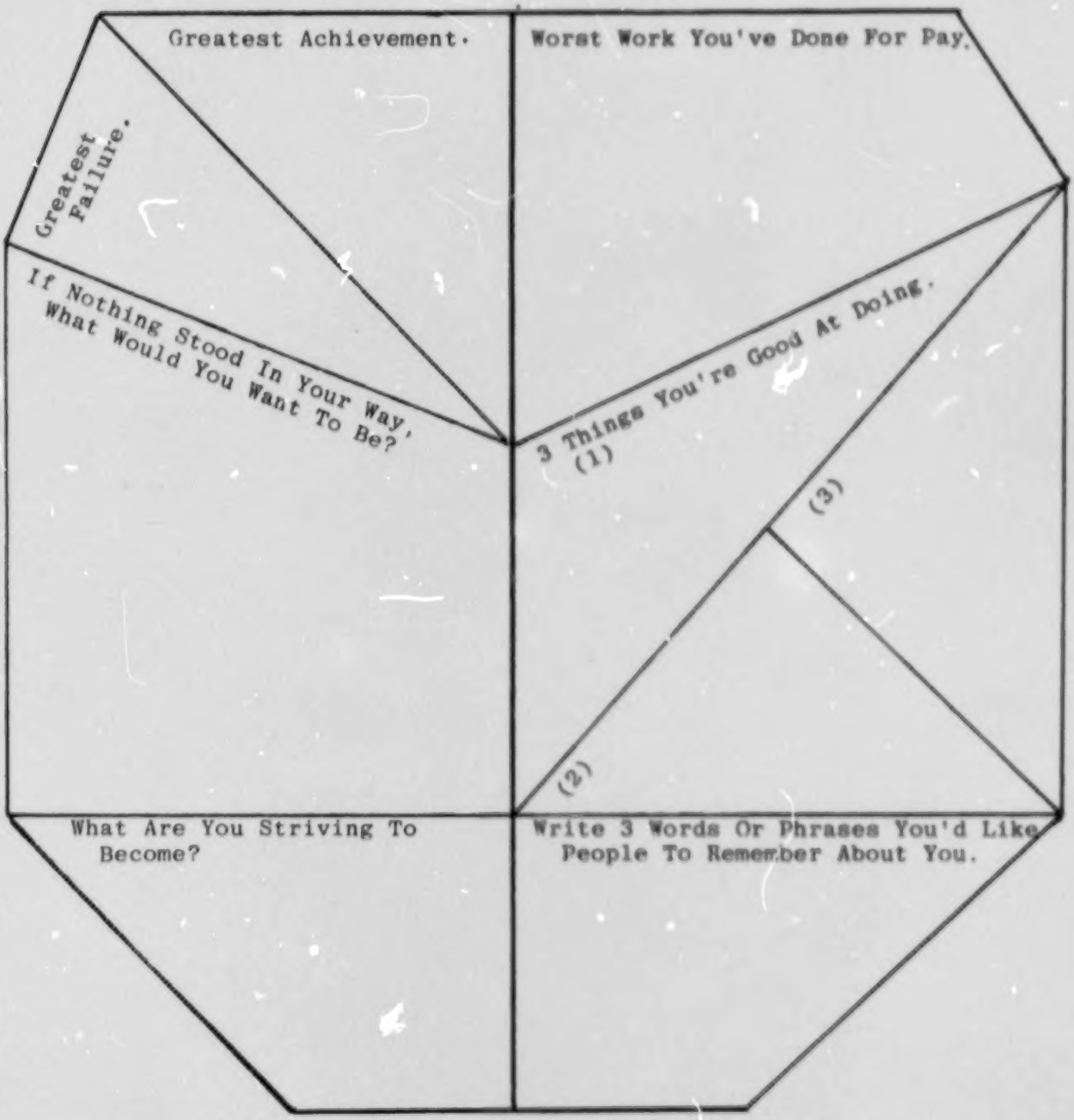
# INTRODUCTION

Pre-industrial training is designed to introduce you to the skilled trades. If you have come hoping to find work in the more traditional areas of clerical, food service, health, education, etc., you have come to the wrong place.

Our purpose is to prepare women for nontraditional jobs that will offer higher salaries, better job security, and an opportunity for advancement.

We hope that when you complete this training, you will have a positive attitude of yourself and your potential.

# SELF ANALYSIS SHIELD


Greatest Achievement.
Worst Work You've Done For Pay.
Greatest Failure.
If Nothing Stood In Your Way, What Would You Want To Be?
3 Things You're Good At Doing.
(1)
(2)
(3)
What Are You Striving To Become?
Write 3 Words Or Phrases You'd Like People To Remember About You.

## SIGNIFICANT OTHERS

In the space below, list four people that have been very significant in your life. In what way have these people helped form your image of yourself? Beside each name, describe the way in which this person contributed to your self-image.

| PEOPLE | CONTRIBUTION |
|---|---|
| 1. | |
| 2. | |
| 3. | |
| 4. | |

## HOW YOU FEEL ABOUT YOU?

How do you feel about YOU? Circle the emotions below that are strongest in you when you look at and think about yourself.

accepting
afraid
angry
attractive
calm
cheated
capable
impatient
inferior
insecure
judgmental
lovely
phoney
confident
confused
deprived
disappointed
embarrassed
excited
frustrated
lovable
pleased
pretty
rejected
repulsive
sad
gifted
happy
hateful
hopeful
hopeless
inadequate
fortunate
secure
shy
sorry for self
sunshiny
ugly
useless

## THINGS I'M PROUD OF

A. My most outstanding physical gift:

B. My best personality trait - why I like it:

C. Three things I do well:

"IT'S OK TO BELIEVE YOU'RE OK "

(+)(+)
I like myself
I like people
People can trust me
I use my talents
I know my feelings
I think for myself
I enjoy work

(+)(-)
I like myself
I put people down
I like to hurt others
I am the Best

(-)(+)
I do not like myself
I feel bad about myself
I waste time
I depend on others
for ideas
I look up to others
People cannot trust me

(-)(-)
I feel bad about myself and others

I cannot trust my own feelings
I cannot trust other people

I do not enjoy work

# MY DECLARATION OF SELF-ESTEEM

I am me.

I am unique. There's not another human being in the whole world like me- I have my own fingerprints and I have my very own thoughts. I was not stamped out of a mold like a Coca-Cola top to be the duplicate of another.

I own all of me- my body, and I can do with it what I choose; my mind, and all of its thoughts and ideas; my feelings. whether joyful or painful.

I own my ideals, my dreams,my hopes, my fantasies, my fears.

I reserve the right to think and feel differently from others and will grant to others their right to thoughts and feelings not identical with my own.

I own all my triumphs and successes. I own also all my failures and mistakes. I am the cause of what I do and am responsible for my own behavior. I will permit myself to be imperfect. When I make mistakes or fail, I will know that I am not the failure- I am still O.K.-and I will discard some parts of me that were unfitting and will try new ways.

I will laugh freely and loudly at myself-a healthy self-affirmation.

I will have fun living inside my skin.

I will remember that the door to everybody's life needs this sign:

HONOR THYSELF

I am me, and I am O.K.

I have value and growth.

Source unknown

INSTRUCTIONS: Read and reflect silently for 10 minutes.

## NON-ASSERTIVE, ASSERTIVE, AND AGGRESSIVE BEHAVIOR

In communicating with others, we can behave in three ways. We can be non-assertive, assertive, aggressive, or indirectly aggressive.

Non-assertive behavior involves violating your own rights by failing to express your honest feelings, thoughts and beliefs and permitting others to "walk over" you. It can also involve expressing yourself in such an apologetic and self-effacing manner that you are disregarded. The goal of non-assertiveness is to please others and to avoid conflict.

Assertive behavior involves standing up for your personal rights and expressing your thoughts, feelings and beliefs in direct, honest, and appropriate ways which do not violate the rights of others. Assertiveness involves respect - not deference - respect for yourself by expressing your needs and defending your rights, and respect for the other person's needs and rights.

When we are aggressive we stand up for our personal rights and express our thoughts and feelings. But we do it in a way which can be dishonest, is usually inappropriate, and always violates the personal rights of the other person. The usual goal of aggressive behavior is domination and winning, forcing the other person to lose.

Because of the reaction accorded to the aggressive woman and the misery experienced by the non-assertive woman, some persons develop the ability to get what they want by indirect means. One can be so indirect that the target of the person's anger may never even recognize the anger, since sneaky ways of getting revenge are employed.

EVERYWOMAN'S BILL OF RIGHTS

1. THE RIGHT TO BE TREATED WITH RESPECT

2. THE RIGHT TO HAVE AND EXPRESS YOUR OWN FEELINGS AND OPINIONS

3. THE RIGHT TO BE LISTENED TO AND TAKEN SERIOUSLY

4. THE RIGHT TO SET YOUR OWN PRIORITIES

5. THE RIGHT TO SAY NO WITHOUT FEELING GUILTY

6. THE RIGHT TO ASK FOR WHAT YOU WANT

7. THE RIGHT TO GET WHAT YOU PAY FOR

8. THE RIGHT TO ASK FOR INFORMATION FROM PROFESSIONALS

9. THE RIGHT TO MAKE MISTAKES

10. THE RIGHT TO CHOOSE NOT TO ASSERT YOURSELF

Taken from: The New Assertive Woman, by Lynn Z. Bloom, Karen Coburn and Joan Pearlman

ROLE PLAYING SITUATIONS

Situation A. A construction company has been forced by federal mandate to include women in their work crews. It was an executive decision. The superintendent and foreman were not advised of the hiring of a woman by personnel until the day before the woman was to begin work. She was assigned to be a member of a 3 person crew. The men resent her! How does she cope? (cover harassment, language, prejudice, sanitary facilities) - (3 participants, woman and 2 male co-workers)

Situation B. A husband/boyfriend becomes wildly jealous of a female when he finds that she has taken a non-traditional job with a construction crew. She took the job because she likes to work out of doors and needs the money. She is the only woman on the job site, and he resents her co-workers. She is in a car pool and sometimes is late returning from work because the crew stops by a tavern for a beer after work. She is also disliked by the wives of her co-workers for the same reason.

Situation C. A female construction worker has appeared at work inappropriately dressed and is repremanded by her foreman (cover proper dress, weather, and safety) (2 participants - woman and foreman.

Situation D. A woman has been promoted to supervise a crew of employees, both new and old - all male. They have never worked for a woman and are not receptive to the idea. How does she handle the situation? What does she do to insure their cooperation? (3 participants) (Cover knowledge of job, ability to do the job, promptness, loyalty, work ethics, and cooperation).

Situation E. A woman has been assigned to a construction crew. She has passed her physical exam for the company but is overweight/underweight. She does not eat proper food and does not exercise despite medical advice. Because of these things she cannot or does not do her share of work. She was absent for several days during skills training because of health related and/or child care problems. Therefore, she missed some vital training instructions and is poorly equipped for the job to which she has been assigned. Her co-workers like her but have lost patience with her and have gone to talk with the foreman. (Cover training, absenteeism, nutrition and exercise, responsibility of job, and the planning for child care) What is the solution? (3-4 participants)

BRIDGING THE GAP - THE FEEL/WANT/WILLING COMMUNICATIONS FORMULA

| | |
|---|---|
| NUMBER ONE | I SAY WHAT I'M FEELING<br>comfortable - uncomfortable - good - bad - enthusiasti disappointed - or whatever is actual and appropriate. |
| NUMBER TWO | I SAY WHAT I WANT<br>I state my goal for MYSELF in the situation (not a goal for the other person) - I make it plain what I want to achieve from the communication. |
| NUMBER THREE | I SAY WHAT I'M WILLING TO DO TO MAKE THAT POSSIBLE<br>This takes the most forethought and honesty--be REAL at this point, and "level" congruently, so there's no question about your WILLINGNESS. |
| THEN--GET FEEDBACK THAT RELATED DIRECT-LY TO YOUR "SENDING" | I ASK -- HOW DO YOU FEEL ABOUT WHAT I'VE SAID<br>And let the other person get a complete answer out -- in other words, REMEMBER TO SHUT UP AND LISTEN. And be sure to ACKNOWLEDGE that you heard him before you go on to:<br><br>I ASK -- WHAT DO YOU WANT IN THIS SITUATION<br>(phrased appropriately, of course) And be sure to let the other get the answer all the way out. And when the answer is complete, ACKNOWLEDGE and then: |
| (THE "WILLING" QUESTION MAY NOT APPLY) | I ASK -- (BUT ONLY IF IT APPLIES OR YOU WANT TO KNOW OR IT'S NECESSARY OR APPROPRIATE) --WHAT ARE YOU WILLING TO DO TO MAKE THAT POSSIBLE? |

Depending on the nature (and severity) of the gap you want to bridge, sometimes it pays to terminate the discussion at this point. I might say "Good" (with a handshake of appreciation), or "Thank you for telling me how you felt and what you want. Let's get together about this again tomorrow and work it out from there."

AND ONCE I'VE USED THIS FORMULA
I'll want to follow through by ACTING OUT WHAT I SAID I WANTED AND WHAT I WAS WILLING TO DO. (My partner will be watching to see if I really meant it. And I'll profit as I set an example of responsible communication/ action.)

AND IF THE OTHER PERSON REFUSES TO CO-CREATE A BRIDGE
That is -- if what I offer is refused -- I STILL ACCEPT THE RESPONSE AS VALID, and at the moment ACKNOWLEDGE and terminate -- without further discussion. I don't start a push/push-back cycle. Instead I let go the pressure on my side and find another opportunity/way to come back at the situation.

THE "I" MESSAGE

ONE OF THE STRONGEST COMMUNICATION TOOLS

INSTEAD OF TALKING ABOUT ANOTHER PERSONS BEHAVIOR, WHAT SOMEONE ELSE IS DOING, I STATE WHAT IS GOING ON INSIDE ME, HOW I FEEL, AND WHAT MY GOALS ARE IN THE SIUTATION.

THERE'S NO BLAME INVOLVED in an I-message -- only a responsible statement of your feelings.

FOR INSTANCE Rather than say
"That really was stupid of you, and you blew it again."

Say
"I sure feel frustrated when the same thing keeps going wrong again and again. I get mad, because I don't know what to do to correct it -- or to get my idea across."

Rather than say
"You really did a good job on that and we all appreciate your work."

Say
"I really appreciate what you've done. I feel so proud and happy about it. It means a lot to me."

THE I - MESSAGE IS THE IS THE STRONGEST KIND OF COMMUNICATION I CAN USE. IT'S A DIRECT LINE THAT TIES IN DIRECTLY TO MY OWN PERSONAL FEELINGS AND RESPONSES. AND AFTER ALL, THAT'S WHAT THE OTHER PERSON REALLY "NEEDS TO KNOW" ABOUT ME IN THE MOMENT. IN ORDER FOR THE OTHER PERSON TO FEEL COMFORTABLE WITH ME, I WANT TO MAKE IT CLEAR WHAT MY FEELINGS REALLY ARE.

WOMEN IN THE U.S. WORK FORCE: HOW MUCH DO YOU KNOW?

1. Women constitute approximately _____ of the paid work force.

   a) 25% b) 33% c) 40% d) 50%

2. ____ of women between 18 and 64 in the U.S. work for pay.

   a) 31% b) 44% c) 59% d) 67%

3. Young women about to graduate from high school should expect to spend at least ____ years in the paid work force.

   a) 10 b) 15 c) 20 d) 25

4. Both husband and wife work in ____ of marriages.

   a) 28% b) 35% c) 47% d) 62%

5. Three years after divorce ____ of fathers are no longer making child support payments.

   a) 81% b) 72% c) 54% d) 23%

6. ____ of working women are concentrated in clerical, sales, service, and allied health jobs.

   a) 3/4 b) 2/3 c) 1/2 d) 1/3

7. ____ of all women workers are employed in clerical occupations.

   a) 10% b) 20% c) 35% d) 40%

8. Women constitute ____ of the engineering work force.

   a) 11% b) 6% c) 3% d) 2%

9. ____ of welders are female

   a) 1% b) 3% c) 6% d) 9%

10. ____ of machinists are female.

    a) 1% b) 3% c) 6% d) 9%

11. ____ of full-time female workers earn more than $15,000 per year.

    a) 15% b) 8% c) 5% d) 2%

12. On the average, full-time male workers earn about ____ a year more than full-time female workers.

    a) $2,000 b) $4,000 c) $6,000 d) $8,000

//

13. On the average, full-time male workers with a college degree earn about ____ a year more than full-time female workers with a college degree.

a) $2,000 b) $4,000 c) $6,000 d) $8,000

14. The median income of full-time women workers with a four year college degree is about the same as men who have ____.

a) a four year college degree b) completed two years of college c) a high school diploma d) completed the eighth grade

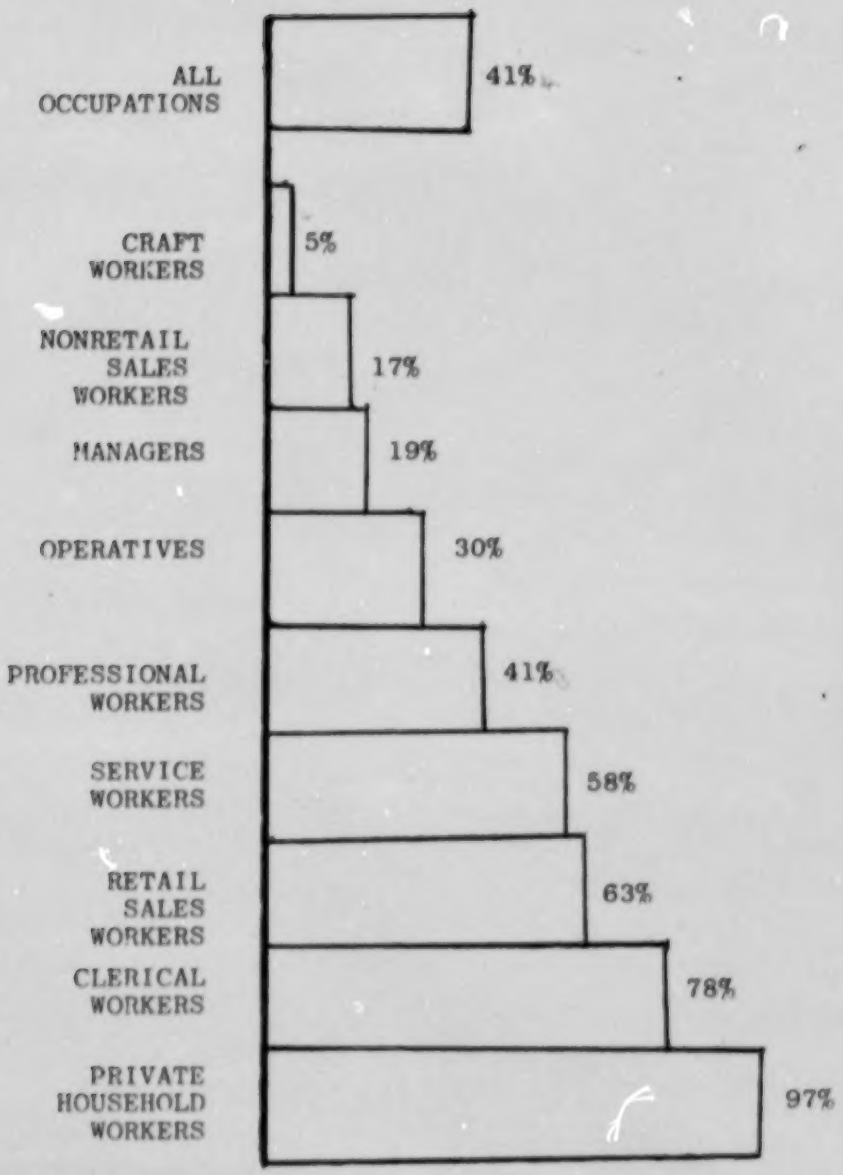
15. By 1985 ____ of all jobs will require a college degree.

a) 10% b) 20% c) 30% d) 40%

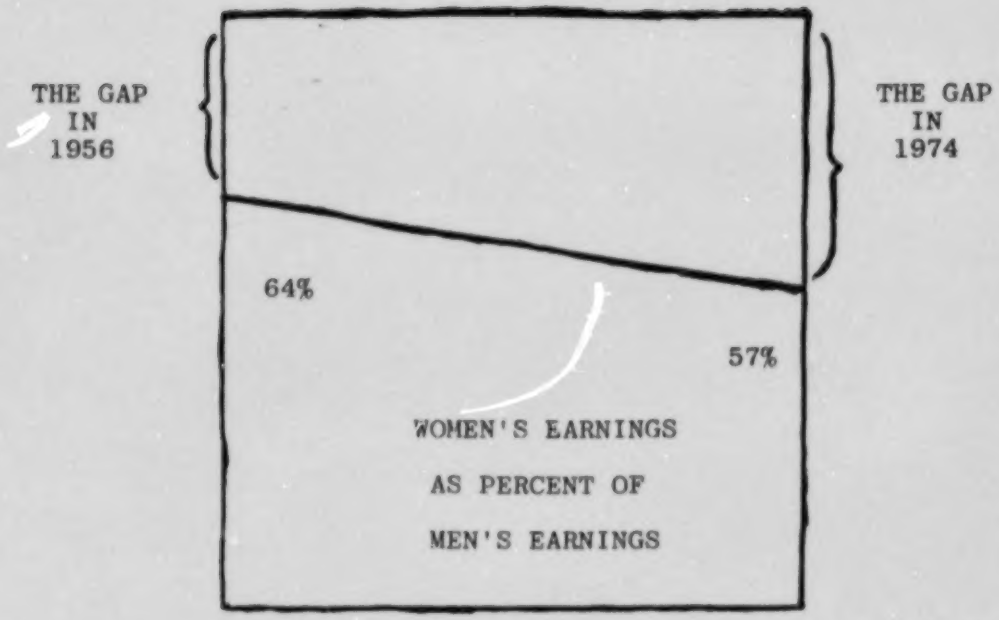
ANSWERS: 1. c; 2. c; 3. d; 4. c; 5. a; 6. b; 7. c; 8. d; 9. c; 10. b; 11. d; 12. c; 13. d; 14. d; 15. b.

NOTE: The figures cited in this paper come from a variety of sources and publications, including Working Woman magazine, 1975 Handbook on Women Workers, U.S. Working Women: A Databook, Resource Center on Sex Roles in Education, the Women's Bureau, and Equals.

WOMEN'S REPRESENTATION IN THE LABOR FORCE



THE EARNINGS GAP . . . . . IS WIDENING



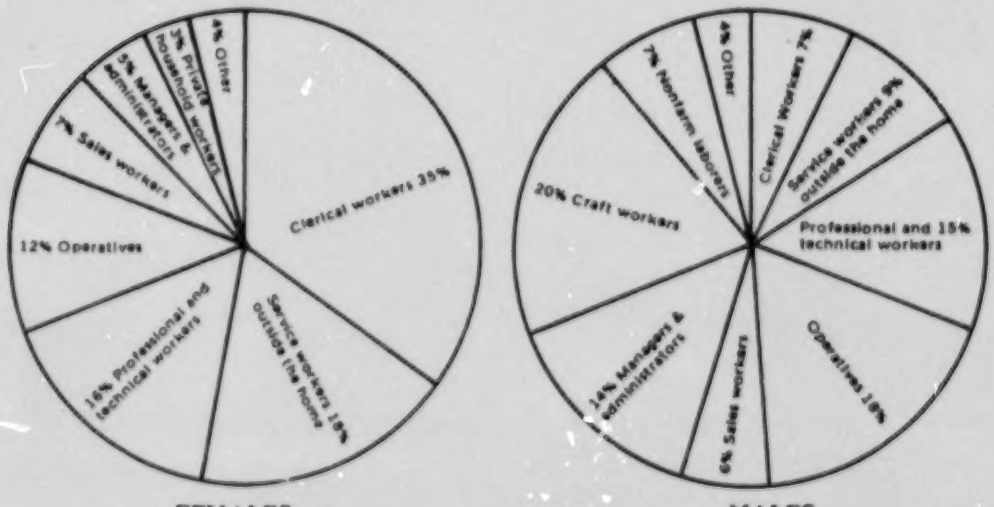
## WOMEN, MEN, AND THE WORLD OF WORK

According to the Department of Labor (1975), one of the most significant changes in the United States economy over the past twenty-five years has been the number of women who have entered the labor market. As of 1977, there were over 40 million women in the labor force, twice as many as in 1950. These women accounted for over 40% of all workers. Furthermore, it is predicted that demand will see a continued increase in the number of women of all ages and status entering the labor market (Oppenheimer, 1973). Nine out of every ten women will work at some point in their lives. The question is no longer, "Will I work?", but rather, "What occupation will I choose?"

Historically, occupational distribution has been different for men and women, and this distribution has remained fairly stable despite the significant changes in the labor force. In the last thirty years, the answers given by both men and women to the question, "What occupation will I choose?" have changed very little. The vast majority of both men and women continue to be employed in occupations dominated by their sex.

As indicated by Figure 1, the largest categories of female and male workers are clerical workers and craft workers respectively. However, the number of males employed in clerical work and the number of female craft workers are very small. Overall, women make up 77% of the clerical workers, and men make up 96% of all craft workers. Although males and females are almost equally employed in professions, these too, are segregated by sex. Women make up 98% of the registered nurses, 70% of the teachers, 82% of the librarians, and 72% of the health technologists. These occupations account for almost 70% of the female professionals. Males, on the other hand, comprise 80% of the computer specialists, 88% of the physicians, and 90% of the engineers.

**FIGURE 1. THE DISTRIBUTION OF MALES AND FEMALES IN THE MAJOR OCCUPATIONAL GROUPS**



## PART I: A RATIONALE FOR THE ENTRY OF WOMEN INTO TRADITIONALLY MALE-DOMINATED OCCUPATIONAL FIELDS IN THE LABOR FORCE

A. Women work for the same reasons that men work: to meet financial responsibilities of home and family, to achieve a sense of contribution to society, to achieve a sense of personal fulfillment

B. Opportunities for women to meet financial responsibilities and achieve societal and personal goals have been limited by the fact that women have been concentrated in relatively few occupational fields in the labor force; they have been concentrated in occupational fields in which earnings are low

C. Responsibilities and goals of all women wanting and needing to work cannot be met in traditionally female occupational fields. Women must be prepared to enter the nontraditional male-dominated occupational fields in which greater opportunities for earnings and achievement are found

## INTEREST CHECK LIST

Read each of the items below and answer appropriatly: Yes, No, Uncertain.

| | | Yes | No | Uncertain |
|---|---|---|---|---|
| (1) | Would you work in close, cramped areas? | ___ | ___ | _____ |
| (2) | Would you be able to lift heavy loads? | ___ | ___ | _____ |
| (3) | Would you work outside in cold, rainy, weather? | ___ | ___ | _____ |
| (4) | Would you work outside in hot, dusty, weather? | ___ | ___ | _____ |
| (5) | Would you prefer to work a regular 40 hour week? | ___ | ___ | _____ |
| (6) | Could you work overtime at short notice? | ___ | ___ | _____ |
| (7) | Do you prefer to work with your hands? | ___ | ___ | _____ |
| (8) | Do you enjoy working with others? | ___ | ___ | _____ |
| (9) | Would working alone hinder you? | ___ | ___ | _____ |
| (10) | Would you enjoy meeting many new people while working? | ___ | ___ | _____ |
| (11) | If your work required you to travel out of town a lot would this be a problem? | ___ | ___ | _____ |
| (12) | Would you like to work in a large city? | ___ | ___ | _____ |
| (13) | Would you like to work in a small town? | ___ | ___ | _____ |
| (14) | Would moving from town to town on your job be a problem? | ___ | ___ | _____ |
| (15) | Is wearing special protective clothing a bother to you? | ___ | ___ | _____ |
| (16) | Would you work at potenially hazardous jobs? | ___ | ___ | _____ |
| (17) | Do you like doing new and different tasks each day? | ___ | ___ | _____ |
| (18) | Would you work at a seasonal job? | ___ | ___ | _____ |

| | | Yes | No | Uncertain |
|---|---|---|---|---|
| (19) | Could you budget money well enough to handle long periods of time without work? | ___ | ___ | ___ |
| (20) | Are you willing to get training before you start to work? | ___ | ___ | ___ |
| (21) | Are you interested in retirement plans or insurance programs? | ___ | ___ | ___ |
| (22) | Would you be interested in working toward a promotion to a higher position? | ___ | ___ | ___ |
| (23) | Would you be willing to join a union? | ___ | ___ | ___ |
| (24) | Are you interested in a high paying job? | ___ | ___ | ___ |
| (25) | Are you interested in a job with a long future? | ___ | ___ | ___ |

Training for Nontraditional Careers

1. Apprenticeship - learning a skilled trade through training on the job. Depending on the trade, apprenticeships require 2 - 5 years of training, plus related classroom instruction. Apprenticeships also involve a written agreement between trainer and trainee with regular wage increases.

2. Vocational and Technical Training at a vocational or trade school usually lasts 18 months - 2 years.

3. On - The - Job Training is available with some companies. This differs from an apprenticeship in that there is no written agreement, there is usually no related classroom instruction, the training period is shorter, and the acceptance procedures are less stringent than with apprenticeship programs.

ARE YOU READY

FOR BLUE-COLLAR WORK?

A dozen questions (and answers)
help you find out

1. Are you generally healthy?
   On the average, people who work in blue-collar jobs are healthier than the population as a whole. You need not be a superwoman, but you should be able to perform fairly strenuous tasks.

2. Do you have your own transportation, and is it dependable?
   Unlike white-collar jobs, which often are in office buildings serviced by public transportation, many blue-collar worksites are on the outskirts of town. To get to work, you may need a car.

3. Would you mind being laid off during downturns in the economy?
   Since many blue-collar industries operate under a seniority system, you will be among the first to be laid off during an economic downturn, so you should be prepared to squirrel away some of your earnings for a rainy day.

4. When you hear or read about women in nontraditional jobs, what is your general reaction?
   If you think that blue-collar jobs aren't "ladylike," then you had better think twice about going into nontraditional work. A strong, positive attitude is a must, because on-the-job harassment and off-the-job prejudices still exist.

5. If you took a nontraditional job, would you expect resentment from men working on the job?
   There's no way of knowing in advance whether the men on the job will resent you --- many women interviewed in these pages think the guys they work with are just great --- but acceptance by male coworkers is usually a problem. It's best to go into the job expecting to be tested, and if harassment doesn't happen, you can consider it a bonus.

6. If men did harass you, would that bother you?
   If harassment bothered you a lot, chances are that the men would see this and probably make work even more unbearable for you. Women who have succeeded at nontraditional work found that by not rising to the daily "teasing," they ultimately won the men's respect and were left alone.

7. What do you think your friends' and family's reaction would be to your working in a nontraditional blue-collar job?
   If you believe that your husband, boy friend, children, best friend, will disapprove or object, talk things out with them. You'll need their support in your quest to go into nontraditional work.

8. Do you have any problems at home that would prevent you from getting training every day or from getting to work every day? Would you object to rotating shifts -- for example, 3 to 11 p.m one week, 11 p.m. to 7 a.m. another? Could you arrange your personal life to accommodate unusual hours?

   Blue-collar jobs often start earlier than white-collar ones, which means that if you have schoolage children, you might have to leave home before they went off to school. You might be assigned to shift work or called out in the middle of the night to fix a pump. Find out about hours and overtime before you take any blue-collar job.

9. Do you mind heights, or working outside in very hot or very cold weather? How much heavy work (lifting, carrying, shoveling, and so on) do you really think you can handle? Do you think you could tolerate loud noise all day long? Would a dirty, dusty, muddy or smelly workplace bother you?

   Working conditions at many blue-collar jobs are considerably different from what you may be used to. For instance, in construction jobs and in a number of industrial jobs you may have to work outside in all sorts of weather. Climbing ladders is essential in many jobs, and although some jobs are not strenuous, most are just that. The din in plants that have lots of machinery may bother you, and chemical plants, pulp and paper mills and other such facilities make Limburger cheese smell like a baby's freshly washed hair. Not every job has all these drawbacks, but nontraditional work means environments many women would find unpleasant.

10. Do repetitive tasks bore you to tears?

    Nontraditional blue-collar jobs range from extremely interesting to pushing the same button all day. Usually the more skills needed, the higher the pay, so if repetition bores you, steer clear of assemblyline work and aim for more complex tasks, such as tool-and-die making, computer repair and other jobs that require training.

11. Would you mind being "low woman on the totem pole," being given little jobs until you built up experience?

    Remember that no matter what industry you go into, unless you have received extensive outside training you will probably be in an entry-level, not very exciting job for at least a year before "bidding out" for something better. You may also be given the worst tasks at first as a kind of test.

12. How would you rate yourself in terms of determination and self-confidence?

    Practically every woman who has succeeded in nontraditional work has the same thing to say about determination: If you don't have "stick-to-it-iveness," you're not going to make it. You must be confident that you can do the job. The tasks often aren't as tough as you might think. In a number of trades, physical requirements are no higher than for housework. But a positive attitude, a sense of why you're working and what you can bring to the job, is very important.

## SOME EXAMPLES OF PROBLEMS

Examples of potential job-related problems which may concern students considering nontraditional fields include the following:

- Sense of isolation on a job, as a function of being the only woman or the only man on that job
- Absence of support from employer or supervisor, as a function of biased views of women in "men's" jobs, or men in "women's" jobs
- Rejection, or even harrassment, by co-workers on a job, again as a function of biased views
- Well-intentioned interference, i.e., overprotection, by co-workers on a job
- Difficulty in advancement, as a function of not being included in informal, or even formal, communication networks
- Unsuitability of job environment (for women) due to dangerous, hot, dirty conditions, or rough language of men
- Likelihood of sexual provocation, and related problems
- Resentment by employer or supervisor, as a result of having to make special provisions for facilities, or having to make special efforts to deal with other resentful workers.

## PROBLEMS WITH PEOPLE

And there is a third category of potential problems. This category is comprised of problems that do not occur on a job or in a classroom, but contribute greatly to student apprehension about nontraditional training and employment.

These problems relate to the need for support from persons who are influential in the personal or private lives of students: Parents and other family members, peers, and spouses.

The study of female students at the postsecondary level found that mothers, husbands, and fathers, in that order, were most influential than either counselors or teachers.

The potential problems here lie in the perceptions of students that mothers or fathers or husbands or wives or girl friends or boy friends may be disappointed in, or critical of, a decision to pursue a nontraditional field.

## EXAMPLES OF PROBLEMS ON THE JOB

Indeed, the barriers to maintaining employment may be at least as difficult to overcome as the barriers to obtaining employment, for many of the barriers are internal, perceptual barriers, and many extend beyond the workplace.

- Employers' resistance to the idea of hiring women in the first place can convert to reluctance to support women on the job, i.e., reluctance to provide encouragement, feedback on good performance, or any of the things that new employees need to adjust and feel comfortable in a new working environment. Employers may not want to see any woman fail in a nontraditional job of any kind, but at the same time, it may be difficult for them to actively work to prove that their initial perceptions of women in nontraditional jobs were erroneous.

- The behavior of male co-workers may run the gamut from rejection or even harrassment at one extreme, to acceptance and support, to overprotection at the other extreme. Overprotection is essentially well-intentioned interference in which men want to do the heavy work or the hard work for women, thereby preventing women from demonstrating that they can do the heavy work or the hard work.

- Women working alone in male-dominated environments may feel a strong sense of isolation which can quickly and easily lead to disenchantment with the job.

- Whether working alone or with other women in male-dominated environments, women may be subject to a form of subtle discrimination which excludes them from informal communication networks and informal associations of co-workers. It is through these networks and associations that information on happenings within an organization, including opportunities for transfers and promotions, is acquired.

- Being "sponsored or adopted as a protege by a supervisor means that performance on the job is recognized and opportunities for transfers and promotions are known. There is some evidence, however, that men are often reluctant to sponsor women's careers because they doubt women's sincerity and/or fear complications for their own marriages.

- The influence of parents, husbands, and male and female friends does not end when the choice of a nontraditional occupation has been made. Lack of support from any or all of these influential persons can be as damaging to career commitment as lack of support from employers and co-workers. For some women, it can be more damaging.

YOUNG family man with paint and drywall experience to work for general contractor in Dalhart, Texas. Send resume to Jerry Hunter, Box 464, Dalhart, Texas, 79022

EXPERIENCED Welder needed. Also Welders helpers. Top experience necessary! Top wages to qualified persons. Work starting approximately September 10th. For interview contact 359-0323 from 8 to 5.

SHOP help needed. Local company needs man to wash and service trucks. Call 373-3705 mornings.

**DRAFTSMAN NEEDED**

Large manufacturing firm looking for good draftsman. Degree not required but must have good mechanical aptitude. Excellent salary and benefits. Send resume to or contact: Dale Griffin, Adams Hard Facing Company, PO Box 1839, 807 NE 6th Street, Guymon, Okla. 73942, 405-338-3336.

NOW Taking applications for carpenters, rod busters and laborers. Apply at office at I-40 West of FM 291 in Alanreed or call 779-3111. Equal Opportunity Employer. In all phases of work, Clearwater Constructors, Inc.

PARTS Department Opening for young married man, experienced in parts department work. Must have references. Established company, good benefits, opportunity for advancement. Apply after 3 PM - American Equipment & Trailer, 610 N. Grand.

**TEXAS TANQUE**

Manufacturing Co. Inc.
Odessa, Texas

TEXAS TANQUE Mfg. Co. Inc. Oil & Gas processing equipment manufacturing & service specialists to better serve your needs.

Corner of West County Rd. & Maurice Rd. Drawer 1366
Odessa, Texas 79760
An Equal Opportunity Employer

# CODE WELDERS

Immediate openings for code welders for pressure vessels with 3 - 5 years experience as ASME code welders. Compensation based on past experience. First and second shifts available. Excellent fringe benefits, including paid holidays, vacation, sick leave, medical/dental insurance, life insurance, long term disability insurance, retirement plan and bonus plan.

Company will pay a one-time $20 travel expense reimbursement if you accept employment. Housing assistance available.

Call collect

**(915) 337-5291**

**Ellen Dunn**

Located 3 blocks north of IH-20 on West County Rd.

## 29 Industrial-Trades

ELECTRICIANS Wanted. Anthony Electric Inc. Spearman, Texas. Call 806-659-3441 or after 6 PM call 806-659-3814.

PLUMBERS helper needed. NO experience necessary. Apply 3317 W 45th.

AMERICAN Equipment and Trailer is now taking applications for shop mechanics that have welding experience, must furnish hand tools. Good wages and fringe benefits for the right persons. Apply 610 N. Grand after 4 PM.

FRAMING carpenter required. Lead hand needed. Willing to pay. 353-0925.

SHEET Metal and Duct Board installers for new apartments. Job moving fast, starting date immediately. 352-3881.

## WANTED:

### Outside TV Serviceman

**Begin immediately**

Run service calls, pay is commensurate with ability. Up to $300 weekly, with fringe benefits — insurance, paid vacation, commission.

### TV Service Center

335 E. Hastings
806-381-0221

Equal Opportunity Employer

# Career Opportunities

## Amarillo, Texas

**Mason & Hanger - Silas Mason Co., Inc., a U.S. Department of Energy plant engaged in the manufacturing and final assembly of Nuclear Weapons, has a career for you. U.S. Citizenship is required for these positions.**

### Tool Makers:

Good working conditions in our modern, new shop equipped with High Precision Machines. Requires successful completion of 4-year apprentice program or at least 5 years solid experience in Precision Machining, Grinding and Jig Boring. Candidates must have Journeyman level qualifications to perform difficult repair and manufacturing of Tools, Gages, Jigs, Fixtures, and Dies from sketches, detailed drawing or verbal instructions. Experience on N/C type equipment is desired.

### Diesel Mechanics:

Requires 4 years solid, recent diesel experience and be familiar with all tools of the skill. Must have ability to perform all types of mechanic duties, including disassemblies and overhaul engines, transmissions, clutches, rear ends and other assemblies on diesel vehicles and equipment.

### Railcar Mechanics:

Potential candidates must have successfully completed an apprenticeship program as a car mechanic in the rail industry or have achieved Journeyman status with a recognized railroad facility with at least 4 years experience in the field.

### Electricians:

Requires 4 years apprenticeship or 4 years solid experience. Industrial experience on motor controls and associated control circuits, assembly, installing, testing, wiring and alarms, light and power systems desired.

### Electronic Technicians:

Must have 4 years recent industrial experience or 4 years apprenticeship training. Maintenance and repair of mini-computers and peripheral equipment desired.

**Call collect or write, stating your qualifications and experience to:**

**R. D. Frymoyer – Personnel Assistant**
**Mason & Hanger - Silas Mason Co., Inc.**
**Pantex Plant**
**P. O. Box 30020**
**Amarillo, Texas 79177**
**(806) 335-1581, extension 2186**

An Equal Opportunity Employer M/F

MASON & HANGER SILAS MASON CO. INC. SINCE 1922

24

## LIFE CHANGE QUESTIONAIRE

| Item No. | Item value | Happened ( ) | Your score | Life event |
|---|---|---|---|---|
| 1 | 100 | _____ | _____ | Death of spouse |
| 2 | 73 | _____ | _____ | Divorce |
| 3 | 64 | _____ | _____ | Marital separation |
| 4 | 63 | _____ | _____ | Jail tern |
| 5 | 63 | _____ | _____ | Death of close family member |
| 6 | 53 | _____ | _____ | Personal injury or illness |
| 7 | 50 | _____ | _____ | Marriage |
| 8 | 47 | _____ | _____ | Fired at work |
| 9 | 45 | _____ | _____ | Marital reconciliation |
| 10 | 45 | _____ | _____ | Retirement |
| 11 | 44 | _____ | _____ | Change in health of family member |
| 12 | 40 | _____ | _____ | Pregnancy |
| 13 | 39 | _____ | _____ | Sex difficulties |
| 14 | 39 | _____ | _____ | Gain of new family member |
| 15 | 39 | _____ | _____ | Business readjustment |
| 16 | 38 | _____ | _____ | Change in financial state |
| 17 | 37 | _____ | _____ | Death of close friend |
| 18 | 36 | _____ | _____ | Change to different line of work |
| 19 | 35 | _____ | _____ | Change in number of arguments with spou |
| 20 | 31 | _____ | _____ | Mortgage over $10,000 |
| 21 | 30 | _____ | _____ | Foreclosure of mortgage or loan |
| 22 | 29 | _____ | _____ | Change in responsibilities at work |
| 23 | 29 | _____ | _____ | Son or daughter leaving home |
| 24 | 29 | _____ | _____ | Trouble with in-laws |
| 25 | 28 | _____ | _____ | Outstanding personal achievement |
| 26 | 26 | _____ | _____ | Wife begin or stop work |
| 27 | 26 | _____ | _____ | Begin or end school |
| 28 | 25 | _____ | _____ | Change in living conditions |
| 29 | 24 | _____ | _____ | Revision of personal habits |
| 30 | 23 | _____ | _____ | Trouble with boss |
| 31 | 20 | _____ | _____ | Change in work hours or conditions |
| 32 | 20 | _____ | _____ | Change in residence |
| 33 | 20 | _____ | _____ | Change in schools |
| 34 | 19 | _____ | _____ | Change in recreation |
| 35 | 19 | _____ | _____ | Change in church activities |
| 36 | 18 | _____ | _____ | Change in social activities |
| 37 | 17 | _____ | _____ | Mortgage or loan less than $10,000 |
| 38 | 16 | _____ | _____ | Change in sleeping habits |
| 39 | 15 | _____ | _____ | Change in number of family get-togethers |
| 40 | 15 | _____ | _____ | Change in eating habits |
| 41 | 13 | _____ | _____ | Vacation |
| 42 | 12 | _____ | _____ | Christmas |
| 43 | 11 | _____ | _____ | Minor violations of the law |

Total score for 12 months _____

NOTE: The more change you have, the more likely you are to get sick. Of those people with over 300 Life Change Units for the past year, almost 90 percent get sick in the near future; with 150 to 299 Life Change Units, about 50 percent get sick in the near future; and with less than 150 Life Change Units, only about 30 percent get sick in the near future.

## COPING WITH STRESS

1. Express negative feelings in a congruent manner.
    (a) Sadness - crying
    (b) Anger - Shouting, tennis, pillow
    (c) Fear - Talking

2. Vigorous physical exercise releases tensions - very valuable in relieving symptoms of depression, migraine headaches, heart disease and hypertension.
    (a) Double resting pulse rate
    (b) Short of breath
    (c) Perspiration
    (d) Make exercise fun - something you like to do.

3. Relaxation techniques - getting in touch with the feeling of complete relaxation.

## SUGGESTIONS ON HOW TO LIVE WITH STRESS

1. WORK OFF STRESS.
2. TALK OUT YOUR WORRIES.
3. LEARN TO ACCEPT WHAT YOU CANNOT CHANGE.
4. AVOID SELF-MEDICATION.
5. GET ENOUGH SLEEP AND REST.
6. BALANCE WORK AND RECREATION.
7. DO SOMETHING FOR OTHERS.
8. TAKE ONE THING AT A TIME.
9. GIVE IN ONCE IN A WHILE.
10. MAKE YOURSELF AVAILABLE.

SELYE, HANS. STRESS. IMPACT, Texas Department of Mental Health and Retardation., Volume IX, No. 2, 15, July/August, 1979.

MEDITATIVE RELAXATION

Find a quiet place
Assume a comfortable position
Remove glasses - shoes or any uncomfortable clothing

1. Close your eyes.

2. Sit quietly in a comfortable position.

3. Remove everything from your mind except what is happening in your body.

4. Take a deep breath and hold it. Slowly exhale while saying "One" or some other word relaxing to you. Repeat. Become aware of your breathing - easily and naturally.

5. Clench your right fist tightly. Slowly unclench it and as you do this release all your tension and anger and frustration. Repeat with left fist.

6. Visualize yourself in some place you would most like to be. Use all your senses in your fantasy - what are you seeing, feeling, hearing, smelling, and tasting. Relax all your muscles and enjoy the pleasant sensory perceptions.

7. Now, beginning with your toes and gradually working up through every part of your body, consciously relax each muscle until your whole body feels quiet, heavy, comfortable and relaxed.

8. Enjoy the warmth that is flowing through your body into your hands.

9. Deep within your mind visualize yourself as relaxed, comfortab and still.

10. Enjoy the lovely feeling of being aware only of your relaxed body and inward quietness.

11. Continue as long as you like. You may drop off to sleep.

12. When your relaxation and reverie is concluded, reactivate your whole body with a deep breath and the following phrases: "I feel like and energy flowing through my legs, hips, abdomen arms and hands, neck and head. The energy makes me feel light and alive." Stretch completely.

## Meeting The Requirements

I. High School Diploma or G.E.D.
   a. Almost all apprenticeship programs require a high school education.

II. Physical Condition
   a. Although some JACs require that apprentices be in "good physical condition," there are no tests of strength given to applicants. The physical hurdle at the time of application is mostly a mental one.

III. Age Requirements
   a. Many of the unions, particularly in the construction trades, have not eliminated age restrictions for the apprenticeship program.
   b. Most industrial sponsors interviewed have lifted age restrictions, or at least raised them substantially, but even there, age restrictions frequently remain for anyone not already working within the plant.

IV. Background Needed to Obtain Admission
   a. The broadest and most frequently mentioned problem that women have in obtaining apprenticeship is stated simply as lack of background. Lack of background covers a wide range of problems, including poor academic preparation for apprenticeship, lack of exposure to the trade, no knowledge of the work involved, and lack of related job experience.
   b. The experiences women have had which are relevant for apprenticeship generally may have been acquired in informal ways outside of school, often after graduation.
   c. The greatest number obtained the experience around their homes--fixing appliances, building cabinets, home or automobile maintenance, painting, plastering,etc.
   e. A major problem is getting the women, and then the unions, to recognize such informal experiences as being valid and relevant.

V. Interest and Knowledge of the Area
   a. Interest in the trade was expressed as essential for acceptance into apprenticeship.
   b. Lack of sufficient interest is indicated by the large proportion of women who do not complete the application process. Frequent references were made about women not turning in the required documents, not taking the tests, or not showing up for the oral interview.

VI. Problems with Written Examinations/Academic Background
   a. JACs mentioned that women score low on tests in mathematics, mechanical ability, terminology, and tool recognition.
   b. A great many of the recommendations from the JACs to women interested in apprenticeship were course-related: the need to take more courses in mathematics, science, physics, shop, patterns, mechanical drawing, drafting, machine shop, blueprint reading, etc.

VII. Problems with the Oral Interview

a. The issue of 'background' or lack of it, comes up again in the oral interview. Here it is used by the JAC to determine a woman's interest, attitudes, and knowledge of the area.

b. The issues addressed by the oral interview are:

1. The women must have an interest in the specific apprenticeship for which she is applying.
2. This interest must be communicated in the oral interview.
3. The interviewer must be able to perceive that interest.

c. One perception frequently mentioned by the JAC was that women did not know much about the trade, and this counts against them. They also reported that women "hide relevant factors," or that they have to dig the information out of them. Recruitment program staff also reported that the women lacked the ability to sell themselves during the interview.

d. Some unions and companies (large manufacturing industries and shipbuilding) are trying to help compensate for school inequities by giving credit for home economics, saying that sewing uses patterns and machinery, and cooking teaches following instructions and measurement. Others have started to give credit for any vocational education class, regardless of what it is. Some have completely eliminated examinations and interviews.

Problems in Apprenticeship

I. Problems with Fellow Workers and Supervisors
   a. Women apprentices are generally subject to more 'testing' than men, and they also must deal with actions and comments directed at them specifically because they are women, such as sexually aggressive remarks or actions. Several of the women apprentices complained about harassment of a sexual nature--ranging from passes or being fresh, to having to work surrounded by nude pin-ups. Fellow workers often use profanity just to see if they can get a rise from a woman.
   b. There were also claims that the women apprentices themselves precipitated problems. One complaint was made that women who are flagmen do not dress properly.
   c. One instance was reported where an apprentice ran away with a co-worker, leaving an enormous amount of work to be done the next day.
   d. In most of the cases of this nature, it is the woman who is to blame, and generally she who must pay the consequences. An example of this was a case where a woman apprentice and her foreman drove to work together every day. They started arriving late or not at all. The problem was solved by firing the woman; the foreman maintained his position.

II. Problems with Chivalry
   a. Chivalry remains as much a barrier to the women as the actual physical requirements of the job. Some women complain that they have to tell men to go away and let them do their own work more frequently than they have to ask for help.
   b. Women apprentices sometimes complained that this type of "special treatment" was a deterrent to their learning necessary skills.
   c. There also is real skepticism on the part of fellow workers that women apprentices can do the job.
   d. When a supervisor similarly slots women into newer and/or lighter machinery--there is tremendous resentment among the old-timers who feel they deserve the lighter work. So although men contribute to it, the men do not like the "favoritism," and generally this works against both women and the apprenticeship program.

III. Problems on the Job
   a. Physical Demands
      1. The problems for women of having adequate physical strength to perform on the job are very real. Again and again, the JACs, the apprentices coordinators, the recruitment program staff and the women apprentices themselves reported that the physical demands

of lifting and moving heavy materials and equipment caused problems and presented limitations to both the entry and success of women.

2. The problems, however, are not a matter of sex so much as a matter of physical strength musculature. There are many tasks that are too physically taxing for the average man. The difference is that, on the whole, men have been encouraged to develop and use their muscles more than women have.

IV. Tools

a. The use of tools is more of a problem to women apprentices than men. Because men have had more exposure, the use of tools on the job comes more naturally to them. Women have more difficulty handling the tools and have to spend more time learning to use them.

V. Problems with Related Instruction

a. The interviews with the related instructors confirmed that generally the women apprentices do not have difficulty with the coursework in the related instruction classes. In fact, many reported that the women actually do better academically than the men, that they are better students and tend to have a better educational background.

b. Where women have problems with the coursework, it is often in mathematics.

c. It was pointed out that women are sometimes reluctant to ask questions and are afraid that their peers will laugh at them.

VI. Problems With Placements

a. To move from apprentice to journeyperson status, a newly admitted apprentice has to obtain and maintain employment in order to learn the skills and acquire the experiences necessary to move from one stage to another. The women continue to face the same employment problems they encountered when seeking their first job to begin their apprenticeship.

VII. Problems of Retention

a. It is no small wonder with the myriad of problems being faced by women in apprenticeship, that the number who drop out is high.

b. That among women there are many more voluntary quits than among men. Men are more likely to leave the program involuntarily.

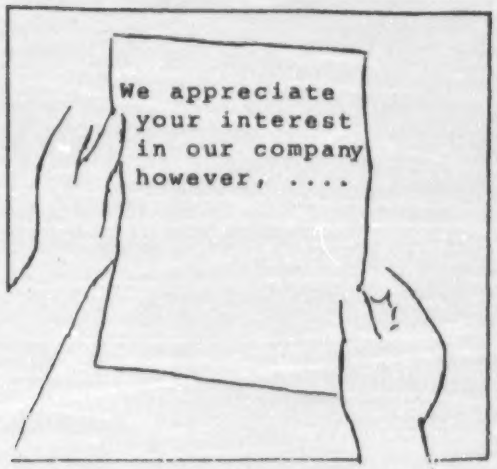
c. For some women what is expected of them on the job is different from what they anticipated, or it is simply overwhelming.
d. Women may drop out while waiting for placement.
e. Transportation to job sites, particularly among construction-related apprentices is often a problem.
f. Many of the women's apprenticeship problems relate to their home situation and family responsibilities.
g. For women with small children, the problem of finding and affording adequate childcare is critical.
h. Competition at home from a husband who is sometimes not earning as much as the woman apprentice is likely to create other problems which several felt has caused some women to drop out.

VIII. Need for Supportive Services
a. The psychological impact of being the only woman on the job is for many women the most difficult aspect of apprenticeship.
b. This isolation was frequently given as a reason for women dropping out.
c. Another area of supportive services that is lacking is that of counseling fellow workers on the job who have never worked side by side with women to prepare them before the woman appears on the job site.

## QUESTIONS OFTEN ASKED DURING AN INTERVIEW

Why would you like to work for this company?
Are you looking for permanent or temporary work?
What job would you most like?
What do you want to be doing in five years? In ten years?
What qualifications do you have for this job?
What subjects in school did you like best? Least?
Do you perfer working alone or with others?
How do you spend your spare time?
What is your main strengths? Your main weakness?
What jobs have you had? Why did you leave?
What salary do you expect?
Do you have any debts?
Have you had any serious illnesses?
Do you smoke?
How do you feel about working overtime?
When can you begin work?
How did you become interested in this company?

## WHY PEOPLE AREN'T HIRED




Negative factors evaluated during the employment interview and which frequently lead to rejection of the applicant, in order of frequency (as reported by 153 companies surveyed by Frank S. Endicott, Director of Placement, Northwestern University):

1. Poor personal appearance
2. Overbearing/overaggressive/conceited: "superiority complex" - "know-it-all"
3. Inability to express self clearly - poor voice, diction, grammar
4. Lack of planning for career - no purpose and goals
5. Lack of interest and enthusiasm - passive, indifferent
6. Lack of confidence and poise - nervous - ill-at-ease
7. Failure to participate in activities
8. Over-emphasis on money - interest only in best dollar offer
9. Poor scholastic record - just got by
10. Unwilling to start at the bottom - expect too much too soon

## WHY PEOPLE AREN'T HIRED

Makes excuses - evasiveness - hedges on unfavorable factors in record
Lack of tact
Lack of maturity
Lack of courtesy - ill-mannered
Condemnation of past employers
Lack of social understanding
Lack of vitality
Failure to look the interviewer in the eye
Limp, fishy handshake
Indecisive
Unhappy married life
Friction with parents
Sloppy application blank
Merely shopping around
Wants job only for a short time
Little sense of humor
Lack of knowledge of field of specialization
No interest in company or in industry
Emphasis on whom the applicant knows
Unwillingness to go where sent
Cynical
Lazy
Intolerant - strong prejudices
Narrow interests
Poor handling of personal finances
No interest in community activities
Inability to take criticism
Lack of appreciation of the value of experience
Radical ideas
Late to interview without good reason
Never heard of company
Failure to express appreciation for interviewer's time
Asks no questions about the job
High-pressure type
Indefinite response to questions

AMARILLO COLLEGE
P.O. Box 447
Amarillo, TX 79178
806-376-5111

Date _____

## APPLICATION FOR EMPLOYMENT *(CLASSIFIED)*

1. Name in full _____ Social Security Number _____

2. Present address _____ Zip Code _____ Telephone Number _____

3. Position for which you are applying _____

4. EDUCATIONAL HISTORY

| | Name of School | Address | Attended | Graduated | Diploma or Degree |
|---|---|---|---|---|---|
| Grade School | | | | | |
| High School | | | | | |
| Business School | | | | | |
| College | | | | | |
| Other Schools or Colleges | | | | | |
| Special Certificate | | | | | |

What were your major subjects in high school? _____

What were your major subjects in college? _____

5. Experience and Positions: *(Please list the most recent first.)*

Name of Firm _____ From _____ To _____
Mo. / Yr. Mo. / Yr.

Street Address _____

City and State _____ Title: _____

Name and Title of Immediate Supervisor: Job Duties: _____

Monthly Salary — Starting _____

_____

Reason for leaving _____ Final _____

---

Name of Firm _____ From _____ To _____
Mo. / Yr. Mo. / Yr.

Street Address _____

City and State _____ Title: _____

Name and Title of Immediate Supervisor: Job Duties: _____

Monthly Salary — Starting _____

_____

Reason for leaving _____ Final _____

REV. 8-78 1000

Experience (Cont.)

Name of Firm _____ From Mo./Yr. To Mo./Yr.

Street Address _____

City and State _____

Name and Title of Immediate Supervisor:

_____

Reason for leaving _____

Title: _____

Job Duties: _____

Monthly Salary — Starting _____

Final _____

---

Name of Firm _____ From Mo./Yr. To Mo./Yr.

Street Address _____

City and State _____

Name and Title of Immediate Supervisor:

_____

Reason for leaving _____

Title: _____

Job Duties: _____

Monthly Salary — Starting _____

Final _____

---

May we contact the employers listed above? _____ If not, indicate which one(s) you do not wish us to contact

_____

6. Are there any other experiences, skills, or qualifications which you feel would especially prepare you for work with the College?

_____

_____

Typing _____ w.p.m.
Shorthand _____ w.p.m.

Date & Location Tested _____
Applicants Estimate _____

PERSONAL REFERENCES
*(Other than Relatives or Former Employers)*

| | NAME | ADDRESS | CITY AND STATE | OCCUPATION |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |

8. List any friends or relatives working for the college _____

9. Have you been convicted of a crime, other than misdemeanors or summary offenses?

_____

10. I hereby certify that the facts set forth in the above employment application are true and complete to the best of my knowledge. I understand that if employed, falsified statements on this application shall be considered sufficient cause for dismissal. You are hereby authorized to make any investigation of my personal history and financial and credit record through any investigative or credit agencies or bureaus of your choice.*

_____
Signature of Applicant

## SOURCES OF INFORMATION ABOUT EMPLOYMENT

1. State Employment Services

   Have more job listings in more occupational categories than any other single source.

   Know about area job openings, even among employers who have not listed openings with the employment service.

   Have approximately 2,400 local offices conveniently located in all parts of the country.

   Operate computerized job banks in all major cities and many smaller ones to bring up-to-minute information on all openings in a metropolitan or larger area to people looking for work at any employment service office in the area.

   Provide national registries for selected professional workers, such as economists, librarians, statisticians, correctional services personnel, and engineers and scientists.

   Provide placement service at national professional conventions.

   Offer counseling and career consultation.

   Provide aptitude and proficiency testing.

   Have daily contacts with thousands of employers.

   Accumulate and distribute local, statewide, and national labor market information.

   Charge no fees.

2. School or College Placement Services

   A productive source for professional openings.

   Usually available only to students and alumni of the school.

3. Want Ads in Newspapers, Professional Journals, and Trade Magazines

   Provide a broad range of definite openings.

Sources of Information About Employment, continued

A large share of listings in magazines devoted to your field are likely to be for jobs you are qualified to fill.

Descriptions of jobs may not be detailed enough for you to decide whether you are qualified.

Analysis of the ads provides information about the extent of employment activity in your field throughout the area.

4. Industrial and Craft Unions

Have exclusive hiring authority for some firms.

Each deals with a limited number of occupations.

Productive source of members, particularly those with seniority.

5. U.S. Civil Service Commission

Handles U. S. Government civilian jobs.

Fills jobs in a wide variety of professional, technical, clerical, cragt, and other occupations.

Positions are located in Washington, D.C., throughout the United States, and overseas.

Jobs are filled on a merit basis as determined by examinations and ratings of experience and education.

Examinations are given several times a year in cities throughout the nation. Tests for entry-level professional positions are conducted at many universities and other schools.

Most post offices have application forms and information on job opportunities. You can also write for information to the U. S. Civil Service Commission, Washington, D. C. 20415.

6. Private Employment Agencies

Usually specialize in a few occupations.

Some charge applicants a fee for registration or placement; others collect fees from employers.

7. Yellow Pages of the Telephone Directory, Industrial Directories, and Chamber of Commerce Lists

Names of firms that employ workers in your field and other information useful in applying to them.

8. Professional Associations

Useful for specialized occupations. Listings available at libraries.

# INTERVIEWING

GUIDELINES FOR PARTICIPANTS IN THE EMPLOYMENT INTERVIEW (adapted from Boyer, Redding, and Rickey.) "Interviewing Principles and Techniques."

NOTE: The purpose of the employment interview is predominantly to give and to receive information; however, persuasion is almost always present in some degree with both parties.

Things the Applicant should do: (the order of items below cannot easily be pre-determined. The employer, of course, is likely to be in control of this.)

1. Clarify the job requirements.

2. Show why you are applying: for this job (or type of job), at this time, with this company.

3. Present your qualifications in these terms: You have something of value to offer the company (assuming you are convinced this is really the case.)
   a. Deal as much as possible in specific details and examples--job experience, avocations, travel, activities, offices held, organizations, school work, special assignments, honors, etc. (in other words: be freely responsive; avoid "yes" and "no" answers; on the other hand, don't "pop off" forever!)
   b. Do not hesitate to admit potential "weaknesses." Under no circumstances should you attempt to bluff or fake on these!
   c. But: Wherever possible, make a transition from a "weakness" to a strength; or at least, when the facts justify it, show some good extenuating circumstance for the "weakness." (This does NOT mean give alibis or excuses!)
   d. Try to summarize and to leave a strong, clear impression of the MAIN REASON (S) you should be qualified to hold a certain type of job with this company.
   e. Do Not depend merely on a "smooth front" (appearance and smile) to "sell yourself." Provide full information to the prospective employer, for your mutual benefit.

4. Deal as much as possible in factual, neutral terms about yourself; avoid vague or evaluational adjectives. (Bad example -- "I had excellent experience in my job with the Smith Manufacturing Company.")

5. Get as much information as possible on such "sensitive" matters as salary (usually in terms of a range, or of the "going average") in the middle or later portions of the inteview. (Avoid giving the impression you expect a soft, high-paying job, or that your chief concern is with money, or that you expect to be hired immediately as a supervisor or executive!)

6. Don't play up the "training period" as though your main concern is to keep going to school, or as though you won't be qualified to hold the job until the company re-educates you!

7. Let the employer (if he will) get the "tone" or atmosphere of the interview. Be a little more formal than usual -- but not a stuffed shirt! (Be cautious about jokes, wisecracks, sarcastic asides, etc.!)

8. Watch the opening moments of the interview: Avoid making remarks to create a "Negative context" for all the rest of the interview. (Bad example -- Starting with a remark like "I'm not really sure my background will be appropriate for your company." Or "I haven't had experience like that.")

9. Be informed about the company: It's history, geographical locations, general methods of doing business, reputation, etc. (This includes knowing who some of the key people in the company are.)

10. Try never to have the interview conclude without some sort of understanding about where you stand, what is to happen next, who is to contact whom, etc. (This does not mean putting the employer against the wall and forcing a commitment).

## Addition

| | | | |
|---|---|---|---|
| 579<br>+115 | 677<br>+277 | 683<br>+568 | 1558<br>+ 723 |

## Subtraction

| | | | |
|---|---|---|---|
| 9624<br>-5846 | 3723<br>-2934 | 964<br>-876 | 4232<br>-1476 |

## Multiplication

| | | | | |
|---|---|---|---|---|
| 32<br>X47 | 182<br>X 52 | 48<br>X48 | 102<br>X 32 | 370<br>X 26 |

## Examples

37 (Minuend)
-12 (Subtrahend)
25 (Difference)

15 (Multiplicand)
X 4 (Multiplier)
60 (Product)

(Divisor)
8(Quotient)
4)32(Dividend)

(1)

19)7258 53)21492 73)47085

Common Fraction; $2 \div 3 = \frac{2 \text{ (Numerator)}}{3 \text{ (Denominator)}}$

A proper fraction has a value less than 1. 2/3, 1/4, 3/5

An imporper fraction has a value greater than 1. 3/2, 7/4, 31/9

A mixed number consists of a whole number and a fraction.
Example 1 3/4

Reduction of fractions. Reduce to its lowest terms.

12/30 15/45 36/72 16/48

Greatest Common Divisor (GCD)

12, 16, 28 14, 21, 35 32, 48, 80

To raise the denominator of a given fraction to a required denominator; divide the denominator of the given fraction into the required denominator, then multiply both terms of the given fraction by the quotient

Example

Change $\frac{1}{4}$ to sixty-fourths

$64 \div 4 = 16$

$\frac{1}{4} = \frac{1 \times 16}{4 \times 16} = \frac{16}{64}$

Change the following fractions to equivalent fractions having the indicated denominator.

$\frac{1}{4}$ to 8ths $\frac{2}{5}$ to 20ths $\frac{3}{6}$ to 48ths $\frac{5}{12}$ to 96ths

Change to whole or mixed numbers.

$\frac{12}{5}$ $\frac{19}{12}$ $\frac{52}{8}$ $\frac{32}{14}$ $\frac{82}{41}$ $\frac{19}{4}$

Change to improper fraction

$2\frac{3}{4}$ $4\frac{4}{5}$ $12\frac{2}{3}$ $19\frac{6}{7}$ $12\frac{2}{7}$

Do the following examples

$\frac{7}{8} + \frac{3}{4}$ $\quad$ $\frac{5}{5} + \frac{8}{9}$ $\quad$ $5\frac{1}{2} + 3\frac{3}{4}$

$\frac{8}{9} - \frac{2}{3}$ $\quad$ $\frac{7}{8} - \frac{3}{5}$ $\quad$ $\frac{3}{4} + \frac{5}{12} - \frac{2}{3}$

$\frac{3}{7} \times \frac{3}{5}$ $\quad$ $\frac{3}{8} \times 12$ $\quad$ $\frac{5}{6} \times \frac{5}{9}$

$18 \div \frac{1}{2}$ $\quad$ $\frac{3}{15} \div \frac{1}{15}$ $\quad$ $\frac{2}{3} \div \frac{1}{2}$ $\quad$ $1\frac{2}{3} \times \frac{3}{4}$

$$\frac{\frac{2}{3} + \frac{1}{4} + \frac{1}{2}}{\frac{5}{8} - \frac{1}{6} - \frac{1}{4}}$$

$$\frac{\frac{2}{3} \div \frac{1}{5}}{\frac{1}{4} \times \frac{1}{3}}$$

$1\frac{3}{4} - \frac{7}{8}$ $\quad$ $2\frac{1}{4} - 1\frac{7}{8}$ $\quad$ $5\frac{1}{6} - 4\frac{5}{8}$

Write the following numbers as decimals

$\frac{3}{10}$ $\frac{5}{100}$ $\frac{1}{8}$ $\frac{3}{16}$ $\frac{3}{8}$ $\frac{7}{16}$

Do the following examples

0.2 + 0.07 + 0.5 = 22.8 + 5.099 + 613.2 =

0.005 - 0.0005 = 1.0020 - 0.2 =

18.5 x 4 = 0.021 x 0.204 = 0.008 x 751.1 =

0.34 ÷ 2 = 5.4 ÷ 9 = 4.2 ÷ 0.01 =

Change the following to fraction

4% 7% $\frac{1}{2}$% $6\frac{1}{4}$% $6\frac{2}{3}$%

Percentage = Base x Rate (P=BR)

120 is what percent of 240?

225 is 25% of what amount?

Find 30% of 620 gallons

What is 4% of 250 lbs.

$7\frac{1}{2}$ inches is what % of 15 inches?

12 = 25% of what number?

8 is $2\frac{1}{2}$% of what number?

To find the interest for any given period of time, multiply the principal by the rate by the time.

$$I = P \times R \times T$$

Find the simple interest on $900 for two years at 6%.

What must be the rate of interest on $400 to produce $25 in 6 months?

How lone will it take for $600 to yield $40 in interest at a rate of 4%?

Add

| | | |
|---|---|---|
| 3 yd | 2 ft | 8 in |
| 4 yd | 2 ft | 6 in |
| 3 yd | 2 ft | 4 in |

| | | | |
|---|---|---|---|
| 6 gal | 2 qt | o | pt |
| 2 gal | 3 qt | 1 | pt |

Addition of signed numbers

| | | | | | |
|---|---|---|---|---|---|
| +7 | +10 | +16 | -16 | -16 | +25 |
| +3 | -7 | +5 | +5 | -14 | -60 |

Subtraction of signed numbers
(Change sign of subtrahend and and apply the rules for addition)

Subtract the following signed numbers.

| | | | |
|---|---|---|---|
| +47 | -26 | -42 | +54 |
| +19 | -17 | -18 | -12 |

(-5) - (-8)  (-7) - (-4)  (-9) - (+16)

Do the following examples.

2 x - 16 =  -18 x - 12 =  -4 x - 6 x 3 =

4 x 3 x - 2 x - 6 =  72 ÷ - 24 =  - 68 ÷ - 17 =

-14 ÷ - 5 =  -24 x 4 ÷ 8 =

Clear parentheses and solve

$94 - (12 + 18 \_ 20) =$

$12\ (3 + 2\ ) =$

$\frac{18}{2}\ (4\ -) =$

$3 \times 6 - 4 =$

$18 + (19 - 14) =$

$42 - 9 - (18 + 2) =$

$(18 \div 3)\ (9 - 7) =$

$(6 \times 8) \div (8 \times 2) =$

$(7 \times 6)\ (6 \times 5) =$

Solve by transposition

| | |
|---|---|
| $P + 3 = 8$ | $P =$ |
| $2N = 25$ | $N =$ |
| $\frac{1}{2} X = 14$ | $X =$ |
| $5C - 3 = 27$ | $C =$ |
| $18 = 5Y - 2$ | $Y =$ |
| $W = \frac{b}{c}$ | $b =$ |
| $V = \frac{W}{A}$ | $A =$ |
| $H = \frac{p}{AW}$ | $W =$ |

$3X = X + 8 + 6$ Solve for X

$2N + 3N = 25$ Solve for N

Add

$$\begin{array}{r} 3a - 4b + 2c \\ -8a + 6b - 3c \\ \underline{6a - 4b + 8c} \end{array}$$

Subtract

$$\begin{array}{r} 8a - 4b + 2c \\ \underline{5a - 6b + 8c} \end{array}$$

$\sqrt{64}$ $\sqrt{81}$ $\sqrt{144}$

$\sqrt{100}$ $\sqrt[3]{27}$ $\sqrt{412164}$

Laws of Exponents:

To multiply powers of the same base, add their exponents.

Example $2^2 \times 2^3 = 2^{2+3} = 2^5$

To divide powers of the same base, subtract the exponent of the divisor from the exponent of the dividend.

Example $3^5 \div 3^3 = 3^{5-3} = 3^2$

Solve the following:

$3^2 \times 3^6 =$ $4^3 \times 4^6 =$ $6^2 \times 6^5 =$

$12^4 \div 12^2 =$ $6^5 \div 6^3 =$ $5^4 \div 5^1 =$

Factoring:

Factor the following:

$8a^2x^2 + 4a^3x =$

$7a^2b^3 - 28abc =$

$4x^2 + 12xy + 9y^2 =$

$9a^2 x^2 - 16a^2y^2 =$

$x^2 + 10x + 21 =$

$x^2 + 5x - 36 =$

$x^2 - 14xy + 33y^2 =$

$15x^2 - 6x - 21 =$

Solve the following:

$(x + 7)(x + 3)$

$(x + 7)(x - 3)$

$(a + 3b)(a - 8b)$

$(x + 7)(x + 7)$

$(x - 3)(x - 3)$

Simultaneous Equations:

$5x + 2y = 32$
$4x - 2y = 4$

$2x + 4y = 50$
$3x + 5y = 66$

$2x + y = 8$
$x - y = 1$

$2x - 3y = 7$
$3x + 4y = 19$

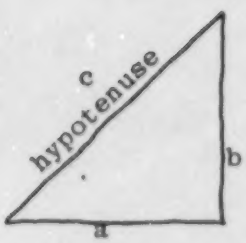
$3a + 4b = 58$
$5a - 2b = 10$

$x + y = 8$
$x - y = 0$

Area of a triangle equals $\frac{1}{2}$ the product of the base and the height.

$$A = \frac{1}{2}\,bh \text{ or } A = \frac{bh}{2}$$

Find area if b = 6, h = 7,
b = 5, h = 10,
b = 7, h = 8




Right Triangles

The square of the hypotenuse of a right triangle is equal to the sum of the squares of the other two sides.

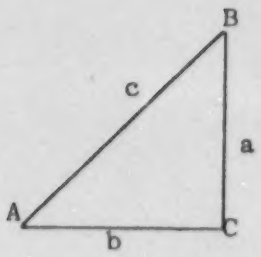
$$c^2 = a^2 + b^2$$

$$c = \sqrt{a^2 + b^2}$$

$$a = \sqrt{c^2 - b^2}$$

$$b = \sqrt{c^2 - a^2}$$

Find c if a = 5, b = 15
Find b if a = 5, c = 250
Find a if c = 250, b = 15




$LA + LB = 90^{\circ}$

$C^2 = a^2 + b^2$

$LA + LB + LC = 180^{\circ}$

Using LA as the reference:

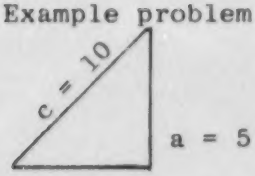
a = opposite = 0

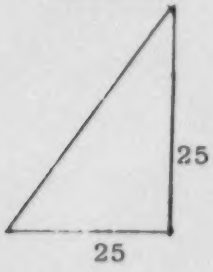
b = adjacent = b

c = hypotenuse = c

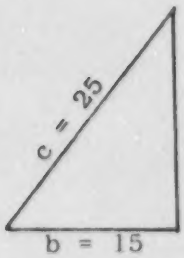
$\text{Sin } A = \frac{opp}{hyp} = \frac{a}{c}$ ; $\text{Tan } A = \frac{opp}{adj} = \frac{a}{b}$ ; $\text{Cos } A = \frac{adj}{hyp} = \frac{b}{c}$

Example problem; Find LA, LB, LC and side b

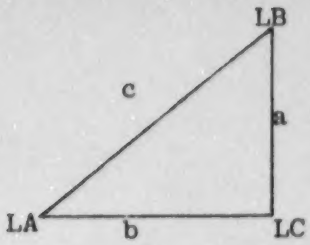



Find LA and side c




Find LA, and side a




LA = $30^{o}$

c = 10

Find side a, and side b

$\text{Sin}A = \frac{a}{c}$ $\quad$ $\text{Tan}A = \frac{a}{b}$ $\quad$ $\text{Cos}A = \frac{b}{c}$

a = sin AXC $\quad$ a = TanAXb $\quad$ b = CosAXC

$c = \frac{a}{\text{Sin}A}$ $\quad$ $b = \frac{a}{\text{Tan}A}$ $\quad$ $c = \frac{b}{\text{Cos}A}$

Number Systems for Computers.

$5 \times 10^3 = 5000$

$3 \times 10^2 - 300$

$5 \times 10^3 + 3 \times 10^2 = 53000 = 5.3 \times 10^3$

5328 may be thought of as:

$5000 = 5 \times 10^3$
$300 = 3 \times 10^2$
$20 = 2 \times 10^1$
$8 = 8 \times 10^0$

| Thousands | Hundreds | Tens | Units |
|---|---|---|---|
| 5 | 3 | 2 | 8 |

5328 has a radix of 10. This is a decimal number.

Radix of 10 means our decimal nubering system has 10 numerals

0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Binary Numbers.

Radix is 2. 0, 1.

In a binary system, which is used in digital systems, the radix is 2 and every number in the system represents an appropriate factor times the suitable power of 2

$0 = 0 \times 2^0 = 0_2$
$1 = 1 \times 2^0 = 1_2$
$2 = 1 \times 2^1 + 0 \times 2^0 = 10_2$
$3 = 1 \times 2^1 + 1 \times 2^0 = 11_2$
$4 = 1 \times 2^2 + 0 \times 2^1 + 0 \times 2^0 = 100_2$

To Convert From Base 10 To Base 2. (Decimal To Binary)

Convert $9_{10}$ to base 2.

Solution: Reduce 9 by dividing by two, using the remainder to represent the digits for the binary number the first remainder is the LSB of Binary Number and the Last Remainder is the MSB of the binary number.

1 ÷ 2 = 0 R1 MSB

2 ÷ 2 = 1 R0

4 ÷ 2 = 2 R0

(Began Here) 9 ÷ 2 = 4 R1 LSB

$9_{10} = 1001_2$

Convert $15_{10}$ to Binary.

1 ÷ 2 = 0 R1

3 ÷ 2 = 1 R1 $15_{10} = 1111_2$

7 ÷ 2 = 3 R1

(Begin Here) 15 ÷ 2 = 7 R1

Convert the following Decimal Numbers to Binary Numbers:

$17_{10}$ =

$25_{10}$ =

$32_{10}$ =

$76_{10}$ =

$153_{10}$ =

To Convert From Base 2 to Base 10 (Binary to Decimal)

Convert $1111_2$ to a decimal number.

MSB $1 = 1 \times 2^3 = 8$

$1 = 1 \times 2^2 = 4$ So $1111_2 = 15_{10}$

$1 = 1 \times 2^1 = 2$

LSB $1_2 = 1 \times 2^0 = 1$

Convert $10000_2$ to decimal.

MSB $1 = 1 \times 2^4 = 16$

$0 = 0 \times 2^3 = 0$ So $10000_2 = 16_{10}$

$0 = 0 \times 2^2 = 0$

$0 = 0 \times 2^1 = 0$

LSB $0_2 = 0 \times 2^0 = 0$

$2^0 = 1$

$2^1 = 2$

$2^2 = 4$

$2^3 = 8$

$2^4 = 16$

$2^5 = 32$

$2^6 = 64$

$2^7 = 128$

Convert the following Binary Numbers to Decimal Numbers.

$111101_2$ =

$110001_2$ =

$100111_2$ =

$10001111_2$ =

Rules For Binary Addition:

| | | | | |
|---|---|---|---|---|
| 0 + 0 = 0 | 0 | 0 | 1 | 1 |
| 0 + 1 = 1 | +0 | +1 | +0 | +1 |
| 1 + 0 = 1 | =0 | =1 | =1 | 10 |
| 1 + 1 =10 | | | | 1 + 1 = 0 with a 1 to carry. |

Problem; Convert the sum of 25 + 4 to binary and add.

Solution

$25_{10} = 11001_2$

$4_{10} = 00100_2$

$29_{10} \quad 11101_2 = 29_{10}$

Add the following:

| | | |
|---|---|---|
| 010001 | 1001101 | 100011 |
| 101000 | 0100011 | 011110 |

Rules for Binary Subtraction.

0 - 0 = 0

1 - 0 = 1

1 - 1 = 0

0 - 1 = 1 and carry (or borrow 1)

| Example: | 11 | 10 | 100 |
|---|---|---|---|
| | -01 | -01 | -11 |
| | =10 | =01 | =001 |

Convert 11 - 6 to Binary and Subtract.

| | |
|---|---|
| $11_{10}$ = | $1011_2$ |
| $6_{10}$ = | $0110_2$ |
| =5 | $0101 = 5_{10}$ |

Substract the follwoing Binary Numbers

| | | |
|---|---|---|
| 010011 | 001101 | 111000 |
| -001010 | -000100 | -010001 |
| 110110 | 111111 | 011011 |
| -011111 | -111010 | -010111 |

Binary Multiplication

$$\begin{array}{rl} 1101 & = 13_{10} \\ \times\ 100 & = 4_{10} \\ \hline 0000 & = 52_{10} \\ 0000 & \\ 1101 & \\ \hline \end{array}$$

$110100_2 = 52_{10}$

Multiply the following Binary Numbers:

| | | |
|---|---|---|
| 10011 | 101111 | 101001 |
| x 101 | x 10 | x 111 |

| | | |
|---|---|---|
| 10011 | 111 | 1101 |
| x 1001 | x101 | x1001 |

Binary Division.

$65_{10} \div 5_{10} = 13_{10}$

$65_{10} = 1000001$

$5_{10} = 101$

```
      01101
101/ 1000001
       101
      00110
       101
      00101
       00101
```

Divide the follwoing Binary Numbers:

$111_3 / \overline{010101_2}$

$011_2 / \overline{011011_2}$

$1000_2 / \overline{110000}$

$1001 / \overline{001101100}$

Exercises

I. WRIST-HAND

1. Squeezing a ball - begin with a racquet ball and progress to a tennis ball. About 50 squeezes per hand. This can easily be done while watching TV, but must be done regularly. Example: if you watch the news at six or ten, use that time. You can even use their scheduling to dictate how long to squeeze with each hand. Example: use your non dominate hand until the first commercial break. That would be your signal to change hands. It is recommended that you start with your non dominate hand, change to dominate hand, and then back to non-dominate. This gives your weaker, non dominate hand a double work out.

2. The elevator - tie a piece of sturdy string around the middle of a broom handle (or any piece of round wood). Tie a weight on the end of the string. This can be a can of vegetables, a sack with rocks in it, anything. Place the broom handle horizontally in front of you and grasp it with hands facing down. Begin turning the broom handle, alternating hands, to wind the string around it and lift the weight. When you have rolled the weight all the way up, reverse the motion of the hands to slowly unwind the string and lower the weight. As strength increases, move the bromm handle farther away from the body to perform the exercise. When you can do it at arms length, begin increasing the weight being rolled up. This will also increase arm and shoulder strength. CAUTION: when performing this exercise with arms extended, it is important that you stand with good posture. Hold your abdomen in and keep your seat tucked under you.

II. ARM-SHOULDER:

1. Wall Push Away - starting position: Stand facing a wall and extend your arms full length in front of you. Walk toward the wall until the palms of your hands rest against the wall. Feet should be parallel and about 2-3 inches apart. Exercise: lean forward from the ankles keeping the body straight until your nose touches the wall and then push back to original standing position. Repeat about 10 times. Progression: move feet back about ½ the length of your foot. Repeat the exercise 10 times being sure that your heels stay on the floor and that the body remains straight. Do not allow the lower back to sag forward or the seat to stick out behind. The movement forward is made from the ankles, not the hips. Variation: When performing the exercise, the elbows can either drop straight down toward the floor or they can flare out to the sides. If you drop the elbows downward, there are fewer shoulder muscles called into play, the exercise is harder, but the tricepts muscle (located on the back side of the upper arm) must work harder, and therefore is strengthened faster. Therefore it is recommended that you begin by allowing the elbows to flare out until some strength is attained and then increase the difficulty by dropping them downward. You may further increase the difficulty by doing push-ups on the floor instead of off the wall.

2. Arm Circles - extend the arms full length horizontally to the sides of the shoulders. Make 10 small circles forward and 10 backwards. Repeat making 10 medium sized circles forward and backward, then 10 large circles. End with 10 small circles again. Do not allow the arms to relax or drop to sides until entire sequence of circles is completed. To increase the difficulty, slow your counting so that the arms must remain in the extended position for a longer time. Maintain good posture!

3. Biceps Curl - one can of vegetables in each hand (use identical vegetables so they will be the same weight). Stand with your arms hanging at your sides, palms of hands facing forward. Bend the elbows and curl the cans toward your shoulders. Lower slowly back to sides. You may increase the difficulty by increasing the weight or the number of times you do the exercise.

4. Back Arm Lifts - lie face down on your bed with arms extended to the sides at shoulder height. Lift the arms straight up as high as possible for a count of 10. Be sure that the hands stay even with the shoulders (don't let them move down toweard the waist). Also, be sure to hold the abdominal muscles tight as you lift the arms. Lower the arms back to the bed for a count of 5. Repeat at least 10 times. Difficulty may be increased by adding a can of soup or vegetables to each hand (be sure the cans weigh the same).

III. ABDOMINAL STRENGTH:

1. Abdominal Curls - lie on your back with your knees bent and feet on the floor about six inches from your hips. Hands are on the floor by your hips. Slowly curl your head and shoulders off the floor toward your knees and reach with your hands toward your feet. Hold for a count of 10 and slowly lower to starting position for a count of 5. Repeat at least 10 times. Each time you come up, try to pull your shoulder blades off the floor. To increase difficulty: (1) fold arms across chest (2) fold arms behind head (3) extend arms above head (Be sure that you do not swing arms forward in the "lift" phase to help you off of the floor. They remain passive and in place by the ears).

2. Cross Curl Ups - lie on your back with your knees bent and feet on the floor about six inches from your hips. Hands are laced together behind your head and elbows are squeezed toward each other as much as possible without putting pressure on the ears. Curl the upper body off the floor and twist so that your right elbow touches the outside of your left knee. Lower slowly back to floor and repeat to the other side. Repeat at least 10 times.

Difficulty may be increased by increasing number of curl ups.

NOTE: This exercise should be done only after you can easily do all of the difficulty levels of #1 ABDOMINAL CURLS. You may need to slip your feet under a heavy object like a couch.

3. Hip Lift - must be done on a mat or cushioned carpet. Lie on your back with knees bent and drawn up over your chest. Hands are on the floor about 6-8 inches out from the hips. Using the abdominal muscles pull your knees toward your shoulders pulling your tail bone as high up off the floor as possible and hold for a count of 5. (Note: This exercise is also good for arm strength and lower back flexibility) Repeat at least 10 times.

IV. LOWER BACK & HAMSTRING FLEXIBILITY (This must accompany abdominal strength if correct posture is to be maintained.)

1. Sitting Stretch - sit on the floor with legs straight in front of you. Lean forward and grasp ankles or feet. Slowly pull your upper body as close to your legs as possible without letting the knees bend. Hold for a count of 10 and slowly release. Repeat at least 10 times. If you cannot reach the ankles, sit with your back to a wall, place your hands behind you on the wall just above your hips and push your body forward. Another alternative is to grasp each end of a towel, bend your knees a little and place the center of the towel under the arches of your feet. Slowly extend your legs until they are straight. Then you can pull yourself forward with the towel. This is for both lower back and hamstring flexibility.

2. Hamstring Stretch - lie on your back on the floor, one leg extended straight out on the floor and one leg extended straight up toward the ceiling. Hold on to the upward leg with both hands. Keeping the knee straight, slowly pull the leg toward the upper body. Hold it as close as possible for a count of 10. Slowly release and repeat 10 times, then stretch the other leg the same way. If you cannot reach your leg with your hands, hold each end of a towel in each hand and place the center of it behind the calf of the upward extended leg. Pull on the towel to pull your leg as close as possible.

3. Lower Back Flexibility - lie on your back on the floor, legs straight, arms out to the sides. Pull the abdominal muscles in tight to press the lower back toward the floor (this is the same as tucking the tail bone under). Try to keep the legs straight on the floor. Hold for a count of 10, release for a count of 5. Repeat at least 10 times. Also, good for abdominal strength.

V. LEG STRENGTH

1. Wall Sit - stand with your back leaning against a wall and your feet about two feet from the wall. Be sure that the surface under your feet is not slick and that you have on a pair of tennis shoes with good gripping soles. Slowly slide your back down the wall until you are in a chair-sitting position (a right angle at the hips and at the knees). Do not use your hands for braces in any way. Hold this position as long as possible. Use a second hand to time yourself. This is good to use as a test of thigh strength.

2. Table Sit - sit on a strong table with the edge coming to the back of your knee. Place a weight on one foot (may be an old handbag with canned goods in it and the handle hooked over your foot). Grasp the edge of the table with both hands and slowly extend the weighted leg until the foot is as high as the knee. Slowly lower. Repeat 10 times and switch to other leg. This exercise is for thigh strength.

3. Pick up - anytime you pick up anything from the floor, do not bend over but squat down to pick it up.

VI. ENDURANCE - An endurance exercise is one which gets your heart beat up to about 150 beats per minute and keeps it there for at least 15 minutes. (the number of beats per minute will vary with age) Examples: fast walking for at least 1½ miles, jogging, rope jumping, swimming continuous laps, bicycling at 5mph for at least 3 miles, and stair stepping. These are known as aerobic exercises. They are done continuously for at least 15 minutes with no "stopping to catch your breath." They should be done a minimum of four times per week. As much as possible try to do them at the same time each day. Consistancy is very

important when trying to condition yourself. You should always preceed your aerobic exercise with some flexibility exercises and perhaps one or two strength exercises. You should do the same after your aerobic exercise.
(See sections III and IV)